

radio stations on frequencies in the microwave spectrum above 928 MHz.

[43 FR 54791, Nov. 22, 1978, as amended at 50 FR 39677, Sept. 30, 1985; 55 FR 20398, May 16, 1990; 58 FR 21407, Apr. 21, 1993; 59 FR 18499, Apr. 19, 1994; 59 FR 59957, Nov. 21, 1994; 61 FR 45635, Aug. 29, 1996]

### § 90.7 Definitions.

*Antenna height above average terrain (AAT).* Height of the center of the radiating element of the antenna above the average terrain. (See § 90.309(a)(4) for calculation method.)

*Antenna height above sea level.* The height of the topmost point of the antenna above mean sea level.

*Antenna structure.* Structure on which an antenna is mounted.

*Assigned frequency.* Center of a frequency band assigned to a station.

*Assigned frequency band.* The frequency band the center of which coincides with the frequency assigned to the station and the width of which equals the necessary bandwidth plus twice the absolute value of the frequency tolerance.

*Authorized bandwidth.* The frequency band, specified in kilohertz and centered on the carrier frequency containing those frequencies upon which a total of 99 percent of the radiated power appears, extended to include any discrete frequency upon which the power is at least 0.25 percent of the total radiated power.

*Average terrain.* The average elevation of terrain between 3.2 and 16 km (2 and 10 miles) from the antenna site.

*Base station.* A station at a specified site authorized to communicate with mobile stations.

*Basic trading areas.* Service areas that are based on the Rand McNally 1992 *Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38-39, with the following additions licensed separately as BTA-like areas: American Samoa; Guam, Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayaguez/Aguadilla-Ponce BTA-like service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas,

Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like service area consists of all other municipios in Puerto Rico.

*Carrier frequency.* The frequency of an unmodulated electromagnetic wave.

*Channel loading.* The number of mobile transmitters authorized to operate on a particular channel within the same service area.

*Control point.* Any place from which a transmitter's functions may be controlled.

*Control station.* An Operational Fixed Station, the transmissions of which are used to control automatically the emissions or operation of another radio station at a specified location.

*Conventional radio system.* A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group. An "urban-conventional system" is one whose transmitter site is located within 24 km (15 miles) of the geographic center of any of the first 50 urbanized areas (ranked by population) of the United States. A "sub-urban-conventional system" is one whose transmitter site is located more than 24 km (15 miles) from the geographic center of the first 50 urbanized areas. See Table 21, Rank of Urbanized Areas in the United States by Population, page 1-87, U.S. Census (1970); and table 1 of § 90.635.

*Developmental operation.* A specially licensed operation for the purpose of testing concepts in the use of radio appropriate to the radio services governed by this part.

*Dispatch point.* Any place from which radio messages can be originated under the supervision of a control point.

*EA-based or EA license.* A license authorizing the right to use a specified block of SMR spectrum within one of the 175 Economic Areas (EAs) as defined by the Department of Commerce Bureau of Economic Analysis. The EA Listings and the EA Map are available for public inspection at the Wireless Telecommunications Bureau's public reference room, Room 5608, 2025 M St. NW., Washington, DC 20554 and Office

of Operations—Gettysburg, 1270 Fairfield Road, Gettysburg, PA 17325.

*Economic Areas (EAs).* A total of 175 licensing regions based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas available from the Bureau of Economic Analysis at (202-606-3700) defined as of February 1995, with the following exceptions:

(1) Guam and Northern Mariana Islands are licensed as a single EA-like area.

(2) Puerto Rico and the U.S. Virgin Islands are licensed as a single EA-like area.

(3) American Samoa is licensed as a single EA-like area.

*Effective radiated power (ERP).* The power supplied to an antenna multiplied by the relative gain of the antenna in a given direction.

*Fixed relay station.* A station at a specified site used to communicate with another station at another specified site.

*Forward links.* Transmissions in the frequency bands specified in §90.357(a) and used to control and interrogate the mobile units to be located by multilateration LMS systems.

*Frequency coordinator.* An entity or organization that has been certified by the Commission to recommend frequencies for use by licensees in the Private Land Mobile Radio Services.

*Geographic center.* The geographic center of an urbanized area is defined by the coordinates given at table 1 of §90.635.

*Harmful interference.* For the purposes of resolving conflicts between stations operating under this part, any emission, radiation, or induction which specifically degrades, obstructs, or interrupts the service provided by such stations.

*Interconnection.* Connection through automatic or manual means of private land mobile radio stations with the facilities of the public switched telephone network to permit the transmission of messages or signals between points in the wireline or radio network of a public telephone company and persons served by private land mobile radio stations. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or

other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized, private, internal system of communication or as an integral part of dispatch point circuits in a private land mobile radio station are not considered to be interconnection for purposes of this rule part.

*Internal System.* An internal system of communication is one in which all messages are transmitted between the fixed operating positions located on premises controlled by the licensee and the associated mobile stations or paging receivers of the licensee. (See subpart O).

*Itinerant Operation.* Operation of a radio station at unspecified locations for varying periods of time.

*Land mobile radio service.* A mobile service between base stations and land mobile stations, or between land mobile stations.

*Land Mobile Radio System.* A regularly interacting group of base, mobile and associated control and fixed relay stations intended to provide land mobile radio communications service over a single area of operation.

*Land Station.* A station in the mobile service not intended to be used while in motion. [As used in this part, the term may be used to describe a base, control, fixed, operational fixed or fixed relay station, or any such station authorized to operate in the "temporary" mode.]

*Line A.* An imaginary line within the U.S., approximately paralleling the U.S.-Canadian border, north of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at Aberdeen, Washington, running by great circle arc to the intersection of 48° N., 120° W., then along parallel 48° N., to the intersection of 95° W., thence by great circle arc through the southernmost point of Duluth, Minn., thence by great circle arc to 45° N., 85° W., thence southward along meridian 85° W., to its intersection with parallel 41° N., thence along parallel 41° N. to its intersection with meridian . . . 82° W., thence by great circle arc through the southernmost point of Bangor, Maine, thence by great circle arc through the southernmost point of

Searsport, Maine, at which point it terminates.

*Line C.* An imaginary line in Alaska approximately paralleling the border with Canada, East of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at the intersection of 70° N., 144° W., thence by great circle arc to the intersection of 60° N., 143° W., thence by great circle arc so as to include all the Alaskan Panhandle.

*Location and Monitoring Service (LMS).* The use of non-voice signaling methods to locate or monitor mobile radio units. LMS systems may transmit and receive voice and nonvoice status and instructional information related to such units.

*Major trading areas.* Service areas based on the Rand McNally 1992 *Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38-39, with the following exceptions and additions:

- (a) Alaska is separated from the Seattle MTA and is licensed separately.
- (b) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.
- (c) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.
- (d) American Samoa is licensed as a single MTA-like area.

*Meteor burst communications.* Communications by the propagation of radio signals reflected off ionized meteor trails.

*Mobile relay station.* A base station in the mobile service authorized to retransmit automatically on a mobile service frequency communications which originate on the transmitting frequency of the mobile station.

*Mobile Repeater Station.* A mobile station authorized to retransmit automatically on a mobile service frequency, communications to or from hand-carried transmitters.

*Mobile service.* A service of radiocommunication between mobile and base stations, or between mobile stations.

*Mobile station.* A station in the mobile service intended to be used while in motion or during halts at unspecified points. This includes hand carried transmitters.

*MTA-based license or MTA license.* A license authorizing the right to use a specified block of SMR spectrum within one of the 51 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Area System MTA Diskette and geographically represented in the map contained in Rand McNally's *Commercial Atlas & Marketing Guide* (the "MTA Map.") The MTA Listings, the MTA Map and the Rand McNally/AMTA license agreement are available for public inspection at the Wireless Telecommunications Bureau's public reference room, Room 628, 1919 M Street NW., Washington, DC 20554.

*Multilateration LMS System.* A system that is designed to locate vehicles or other objects by measuring the difference of time of arrival, or difference in phase, of signals transmitted from a unit to a number of fixed points or from a number of fixed points to the unit to be located.

*Navigable waters.* This term, as used in reference to waters of the United States, its territories and possessions, means the waters shoreward of the baseline of its territorial sea and internal waters as contained in 33 CFR 2.05-25.

*900 MHz SMR MTA-based license or MTA license.* A license authorizing the right to use a specified block of 900 MHz SMR spectrum within one of the 47 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Areas System MTA Diskette and geographically represented in the map contained in Rand McNally's *Commercial Atlas & Marketing Guide* (the "MTA Map"), with the following exceptions and additions:

- (1) Alaska is separated from the Seattle MTA and is licensed separately.
- (2) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.
- (3) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.
- (4) American Samoa is licensed as a single MTA-like area.

The MTA map is available for public inspection in the Office of Engineering and Technology's Technical Information Center, room 7317, 2025 M Street NW., Washington, DC.

*Non-multilateration LMS System.* A system that employs any of a number of non-multilateration technologies to transmit information to and/or from vehicular units.

*Operational Fixed Station.* A fixed station, not open to public correspondence, operated by, and for the sole use of those agencies operating their own radiocommunication facilities in the Public Safety, Industrial, Land Transportation, Marine, or Aviation Radio Services. (This includes all stations in the fixed service under this part.)

*Output Power.* The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load of the impedance recommended by the manufacturer.

*Paging.* A one-way communications service from a base station to mobile or fixed receivers that provide signaling or information transfer by such means as tone, tone-voice, tactile, optical readout, etc.

*Person.* An individual, partnership, association, joint stock company, trust or corporation.

*Private carrier.* An entity licensed in the private services and authorized to provide communications service to other private services on a commercial basis.

*Radio call box.* A transmitter used by the public to request fire, police, medical, road service, or other emergency assistance.

*Radiodetermination.* The determination of position, or the obtaining of information relating to position, by means of the propagation of radio waves.

*Radiofacsimile.* A system of radiocommunication for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

*Radiolocation.* Radiodetermination used for purposes other than those of radionavigation.

*Radionavigation.* Radiodetermination used for the purposes of navigation, including obstruction warning.

*Radio teleprinting.* Radio transmissions to a printing telegraphic instrument having a signal-actuated mechanism for automatically printing received messages.

*Secondary operation.* Radio communications which may not cause interference to operations authorized on a primary basis and which are not protected from interference from those primary operations.

*Signal booster.* A device at a fixed location which automatically receives, amplifies, and retransmits on a one-way or two-way basis, the signals received from base, fixed, mobile, and portable stations, with no change in frequency or authorized bandwidth. A signal booster may be either narrowband (Class A), in which case the booster amplifies only those discrete frequencies intended to be retransmitted, or broadband (Class B), in which case all signals within the passband of the signal booster filter are amplified.

*Specialized Mobile Radio System.* A radio system in which licensees provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz bands on a commercial basis to entities eligible to be licensed under this part, Federal Government entities, and individuals.

*SMSA (Standard Metropolitan Statistical Area).* A city of 50,000 or more population and the surrounding counties.

*Station authorization.* A license issued by the Commission for the operation of a radio station.

*Telecommand.* The transmission of non voice signals for the purpose of remotely controlling a device.

*Telemetry (also telemetry).* The transmission of non-voice signals for the purpose of automatically indicating or recording measurements at a distance from the measuring instrument.

*Travelers' Information Station.* A base station in the Local Government Radio Service used to transmit non-commercial, voice information pertaining to traffic and road conditions, traffic hazard and traveler advisories, directions, availability of lodging, rest stops, and service stations, and descriptions of local points of interest.

*Trunk (telephony).* A one or two-way channel provided as a common traffic artery between switching equipment.

*Trunk group.* All of the trunks of a given type of characteristic that extend between two switching points.

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**Trunked radio system.** A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group.

**Urbanized Area.** A city and the surrounding closely settled territories.

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.7, see the List of CFR Sections Affected in the Finding Aids section of this volume.

### Subpart B—Public Safety Radio Services

#### § 90.15 Scope.

The Public Safety Radio Services include the Local Government, Police, Fire, Highway Maintenance and Forestry-Conservation Radio Services. Rules as to eligibility for licensing, frequencies available, and any special requirements as to each of these radio services are set forth in the following sections.

#### § 90.16 Public Safety National Plan.

The Commission has established a National Plan which specifies special policies and procedures governing the Public Safety Radio Services and the Special Emergency Radio Service. The National Plan is contained in the *Report and Order* in General Docket No. 87-112. The principal spectrum resource

for the National Plan is the 821-824 MHz and the 866-869 MHz bands. The National plan establishes planning regions covering all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. No assignments will be made in the 821-824 MHz and 866-869 MHz bands until a regional plan for the area has been accepted by the Commission.

[53 FR 1023, Jan. 15, 1988]

#### § 90.17 Local Government Radio Service.

(a) **Eligibility.** Any territory, possession, state, city, county, town or similar governmental entity, including a district and an authority, but not including a school district or authority or a park district or authority except as provided for in § 90.242, is eligible to hold authorizations in the Local Government Radio Service to operate radio stations for transmission of communications essential to official activities of the licensee.

(b) **Frequencies available.** The following table indicates frequencies available for assignment to stations in the Local Government Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section.

LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
<b>Kilohertz:</b>		
530 .....	Base (T.I.S.) .....	23
1610 .....	.....do .....	23
2726 .....	Base or mobile .....	1
2000 to 10,000 .....	Fixed, base or mobile .....	25
<b>Megahertz:</b>		
37.10 .....	Base or mobile .....	2
37.18 .....	.....do .....	2
37.26 .....	.....do .....	2
39.06 .....	Mobile .....	2, 3
39.10 .....	Base or mobile .....	2
39.18 .....	.....do .....	2
39.50 .....	.....do .....	2
39.58 .....	.....do .....	2
39.82 .....	.....do .....	2
39.90 .....	.....do .....	2
39.98 .....	.....do .....	2
45.08 .....	.....do .....	
45.12 .....	.....do .....	
45.16 .....	.....do .....	
45.20 .....	.....do .....	
45.24 .....	.....do .....	
45.28 .....	.....do .....	
45.32 .....	.....do .....	